



NATIONAL SCIENCE FOUNDATION

**Notice of Permit Applications Received
Under the Antarctic Conservation Act of 1978**

AGENCY: National Science Foundation

ACTION: Notice of Permit Applications Received under the Antarctic Conservation Act of 1978, P.L. 95-541.

SUMMARY: The National Science Foundation (NSF) is required to publish a notice of permit applications received to conduct activities regulated under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act at Title 45 Part 670 of the Code of Federal Regulations. This is the required notice of permit applications received.

DATES: Interested parties are invited to submit written data, comments, or views with respect to this permit application by **[Insert 30 days from date of publication in the Federal Register]**. This application may be inspected by interested parties at the Permit Office, address below.

ADDRESSES: Comments should be addressed to Permit Office, Room 755, Division of Polar Programs, National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230.

FOR FURTHER INFORMATION CONTACT: Li Ling Hamady, ACA Permit Officer, at the above address or ACApermits@nsf.gov or (703) 292-7149.

SUPPLEMENTARY INFORMATION: The National Science Foundation, as directed by the Antarctic Conservation Act of 1978 (Public Law 95-541), as amended by the Antarctic Science, Tourism and Conservation Act of 1996, has developed regulations for the establishment of a permit system for various activities in Antarctica and designation of certain animals and certain geographic areas requiring special protection. The regulations establish such a permit system to designate Antarctic Specially Protected Areas.

APPLICATION DETAILS:

1. Applicant

Permit Application: 2015-011

Dr. Ari Friedlaender

2030 Marine Science Drive, Hatfield Marine Science Center, Oregon State University, Newport, OR 97365.

Activity for Which Permit is Requested

Take, Import into USA. The applicants propose to satellite tag and collect skin and blubber biopsy samples of minke, humpback and Arnoux's beaked whales. The applicants would address the following basic hypotheses that require collecting of genetic and blubber samples from biopsies. They will investigate the stock structure of whales that inhabit the nearshore waters of the AP which requires genetic information contained in skin samples. These samples can be processed and compared against voucher samples from breeding populations in the Pacific Ocean to determine the population structure of animals feeding in Antarctic waters. Likewise, the sex of individual whales can be determined from genetic markers from the skin samples. Knowing the ratios of males: females can provide information about the growth and structure of the cetacean communities. In order to understand the diet of different marine mammals and if/how these change spatially or over the course of a season, they can compare the stable isotope signatures in blubber to those of their known prey items. This common analysis is potent and can greatly inform studies on the feeding behavior of whales in the region. The applicants would use standard dart-biopsy methods that have been used for more than 2 decades and are proven to be both humane and appropriate. A small sterilized stainless steel tip would be attached to the end of a customized crossbow bolt that has a flotation stopper engineered on to it. When the dart hits the whale, it penetrates the outermost skin and collects a ~10x5 mm sample of both skin and blubber. These samples are placed in sterilized cryovials and kept in -20C freezers until they are shipped frozen back to the labs for analysis. For satellite tagging, they are testing specific hypotheses regarding how the movement and behavior of humpback whales relates to that of their prey, Antarctic krill, and sea ice in the Antarctic environment. Satellite-transmitting tags offer the opportunity to track the movement of individual whales over long time periods and in relation to physical processes in their environment. They will deploy 10 satellite-linked implantable tags, designed to a maximum of 290mm into the back of the whale (generally just forward and to the left or right side of the dorsal fin). The tag is designed to penetrate just beneath the skin and hypodermis to anchor the tag. All external components of the tag are built from stainless steel and the tag is surgically sterilized prior to

deployment. Each tag is deployed with the use of a compressed air gun. Once deployed, each tag turns on during the subsequent dive of the whale. Tags will then transmit upon each initial surfacing, and each 30 seconds of subsequent 'dry time' until the tag falls off the whale, malfunctions or the single AA lithium battery is exhausted. Investigators with significant experience in these methods would conduct both biopsy and satellite tagging.

Location

Antarctic Peninsula between Marguerite Bay and the Gerlache Strait, inshore waters

Dates

January 1, 2015- December 31, 2018

Nadene G. Kennedy
Polar Coordination Specialist
Division of Polar Programs

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